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June 1, 2015

Rachelle Thompson
US EPA Region 9
Mail Code SFD
75 Hawthorne Street
San Francisco, CA 94105

Re: Draft Focused Feasibility Study
United Heckathorn Superfund Site
Richmond, Contra Costa County, California

Dear Ms. Thompson:

This letter has been prepared on behalf of Shell Oil Company to provide comments on the above-referenced Draft Focused Feasibility Study (FFS) issued by the US Environmental Protection Agency (USEPA) in February 2015. These comments are being provided to USEPA in preparation of the technical meeting scheduled for June 10, 2015 at USEPA's Region 9 office, with the hope that the questions and/or concerns could be addressed during this meeting.

Based on our review, we have concerns regarding the level of detail in the evaluation of remedial alternatives and for potential unknowns that may impact implementation, long-term success, and ultimate costs of the identified remedial measures. Provided below is a summary of the issues of concern:

1) An alternative not included in the FFS would be to reduce ship traffic or ship type (i.e., use a barge instead of normal hulled ship) within the Lauritzen Channel, clean all storm drains and outfalls, install an active cap (activated carbon and modified clay), implement institutional controls (ICs), and perform monitoring. This alternative would require working with the adjacent businesses to minimize any business impact due to the ship type restriction; however, it would likely provide a more certain long-term solution with less potential exposure issues for a lower cost.

2) The FFS stated that the City of Richmond Municipal Outfall at the head of the Lauritzen Channel will be evaluated as an ongoing source of contamination to the Lauritzen Channel after removal of contaminated sediment is completed. In addition, the FFS stated that the pipes and outfalls have not been inspected or sampled during wet weather conditions. The potential for recontamination is important to understand in evaluating potential remedy effectiveness. As part of the FFS, we recommend that the lines discharging to the Lauritzen Channel be cleaned and video inspected to identify potential

integrity issues and a potential ongoing source. If an integrity issue is identified, the level of effort and any associated cost to resolve this issue will likely be considerable and have not been included in the FFS.

3) One remedial alternative should have included the complete removal of fine-grained contaminated sediments from within the rip-rap and behind sheet piled areas. The previous remedial response allowed contaminated sediment to be left in-place, become re-suspended, and re-deposit in "clean" areas. It is possible that any alternative that leaves material in-place may provide a similar future result. The alternative could include complete removal of this material through excavation and/or specialized hydraulic dredging.

4) The projected depth of sediment removal will terminate within a soil profile that has higher concentrations than are currently present at the sediment surface. Therefore, if erosion of a proposed cap occurs or the cap is penetrated causing a release or a direct pathway to underlying sediment, the contaminated sediment redistributed and/or exposed may exceed the present day risk.

5) An updated evaluation of risks and hazards from fish consumption was performed in 2010 using the 2008 fish tissue data, but not the most recent 2013 fish tissue data. The 2010 updated risk calculations indicated that total DDT and dieldrin concentrations in fish tissue from the Lauritzen Channel could pose unacceptable risk to people consuming fish. Therefore, the technical memorandum presenting the reassessment of ecological RGs did not include an updated evaluation of ecological risk beyond that required to set new RGs. The ongoing presence of ecological risks is assumed. The 2008 and 2013 fish tissue data should be reviewed to understand if tissue concentrations are increasing or decreasing over time and the HHRA and ERA should be revised based on the most recent data.

6) If the Lauritzen Channel is to remain an active water way, it is likely that ship activities (propeller wash, anchoring, etc.) will cause damage to the cap at some point in the future. This type of damage may allow contaminated sediment to become re-suspended, re-deposit in "clean" areas, and return the site to an unacceptable condition. Included as an remedial component, USEPA should consider developing an enforceable IC to prevent these impacts. USEPA should make any party that disturbs the cap and causes re-contamination of the Lauritzen Channel financially responsible (possibly by naming the entity as a Responsible Party) to resolve the associated impact.

7) The FFS states that other pipes and conveyances that are not visible may exist and act as preferential pathways for the transport of contamination from the upland area to the Lauritzen Channel. Shell recommends that an assessment be performed to identify any potential preferential pathways and that the results of the assessment be incorporated into the FFS, along with one or more proposed approach and cost estimate required to address this issue as part of the remedial action.

8) The FFS states that groundwater discharge will continue to contribute DDT to sediments, surface water, and biota in the Lauritzen Channel if not controlled; however, the remedy does not control groundwater discharge throughout the entire Channel or when the activated carbon component of the cap becomes spent. The FFS should include an evaluation for an on-shore groundwater contingency (i.e., removal, treatment, and discharge) to address this issue.

9) The estimated costs range from $21.7M to $22.7M is a very tight range and may lead a reviewer (USEPA or 3rd Party) to potentially select a more stringent response action than required or would be more cost effective due to the perceived small cost difference. With respect to the issues identified above, additional costs should be developed and applied to each alternative, possibly resulting in a larger but more fulsome cost range. In addition, there appears to be numerous issues and/or inconsistencies in the calculations presented in Appendix G. These issues include, but are not limited to, the following:

    a. Southern pile sheet pile quantities do not match text.
    b. The cost estimate does not include either the removal or sealing of non-functional pipes and outfalls, or the lining or pipes where compromises are identified.
    c. The cost for preparation of plans appears excessive, as most of these plans exist and only require modification.
    d. A design cost of $900,000 appears excessive.
    e. A construction management cost of $1M appears excessive.
    f. Numerous quantities in the spreadsheets do not match text and need to be vetted.
    g. A 25% markup on subcontract fees is excessive.

We look forward to further discussing these issues with you during the technical meeting scheduled for June 10, 2015 at USEPA's Region 9 office. If you have any questions regarding the comments prior to this meeting, please contact me at (972) 956-9100.

Sincerely,
NewFields

Patrick C. Gobb, P.E.
Partner

cc: Kim Lesniak - Shell
Carol Campagna - Shell